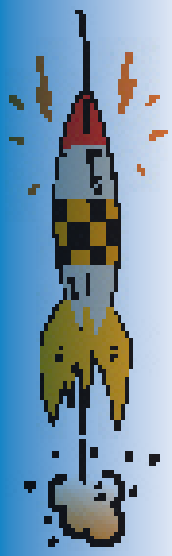
Volume 4
Issue 7

Calci-yum!!!



Space Nutrition

Calcium (kal-see-um) is a mineral our bones need to grow and be strong. Calcium is found in the foods and beverages we eat and drink. Did you know that milk, broccoli with cheese, and pizza are loaded with calcium?

If we don't eat enough calcium, then our bones become weak. Healthy bones have millions of tiny holes in them. Without calcium, the tiny holes start to become larger. This can cause the bone to become very brittle, and can lead to a disease called osteoporosis (os-tee-oh-po-row-sis). People with osteoporosis have extremely weak bones that can be very painful. They have to be careful because they could break a bone just by falling down. While osteoporosis usually occurs in older people, not getting enough calcium can be bad for anyone! Calcium is needed for other things besides bones. We need calcium for strong muscles, healthy blood, and healthy teeth and gums.

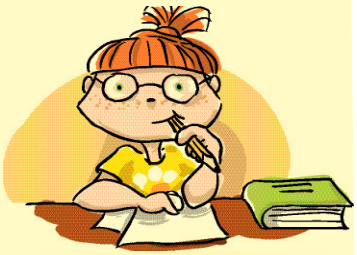
How much calcium do we need? People between 9 and 13 years old need to eat 1,300 milligrams (mg) of calcium each day. A milligram (mil-li-gram) is a measurement of the amount. If you look for calcium on a food label you will not see it listed in milligrams. Instead, you will see it listed as the percent of daily value (%DV). The %DV listed on a food label is for adults.

For young people between 9 and 13 years old, your %DV numbers for all the foods you eat in a day should add up to at least 130%DV each day for calcium.

Explore. Discover. Understand.

- As you may know there is no gravity in space. Without gravity there is less pressure on the bones which causes them not to be as strong as they are on Earth.
- Astronauts lose bone during space flight. Simply eating more calcium is not going to help their bone loss because their body's ability to absorb calcium is decreased during space flight.
- Right now scientists are researching ways to provide the astronauts with the right amount of calcium that will keep their bodies healthy when we send them to Mars.

Thea's Corner...



Can you choose the foods that Thea needs to get 130%DV? Use the list of foods and drinks to fill in the rest of her breakfast, lunch, and dinner. After you make your choices, add everything up to see how much calcium she is getting. Only use items one time and make sure she gets one drink per meal.

Foods:

1 orange = 56 mg	1 English muffin = 92 mg	3 slices bacon = 5 mg
2/3 cup raisins = 53 mg	1 cup yogurt with fruit = 315 mg	1 small taco = 221 mg
1 cup broccoli = 90 mg	1 slice cheese pizza = 116 mg	1 snack cake = 0 mg
10 French fries = 10 mg	1/2 cup ice cream = 80 mg	1/2 cup macaroni and cheese = 180 mg

Drinks:

6 oz. juice = 20 mg
8 oz. calcium-fortified orange juice = 300 mg
8 oz. 2% milk = 271 mg
10 oz. strawberry milkshake = 320 mg
8 oz. grape drink = 15 mg
6 oz. hot chocolate = 40 mg

	Food Item	Milligrams(mg)
BREAKFAST:	2 waffles with syrup	40 mg
SNACK:	8 oz. water	0 mg
LUNCH:		
SNACK:	8 oz. soda	9 mg
DINNER:	4 baked chicken sticks	36 mg
	1 cup steamed cauliflower	34 mg
	TOTAL:	

Now divide the total amount of mg by 1,000 mg, and multiply that number by 100 to get her %DV.

(_____ mg/1,000 mg) x 100 = _____%DV

Did You Know?

- Almost 99% of the calcium in our bodies is found in our bones.
- Vitamin D helps the body absorb calcium from the diet.
- Women have to really watch their calcium intake because they are more likely to develop osteoporosis than men.

Word of the Month

Sodium

Can you guess what this word means? Look it up in the dictionary and see if you were right. We'll have more on this next month!

Web Challenge: Food labels are easy to read once you know what to look for. Use the web sites below to find out more information on how to read food labels.

http://www.ars.usda.gov.ls.kids.nutrition.nutritionIntro.htm
http://www.cdc.gov/powerfulbones/games_fun/
http://www.nasakids.gov

Check out Thea's Bonus Page, experiments you can try, and even stuff you may have done at our website:
http://haco.jsc.nasa.gov/biomedical/nutrition/kids.shtml
email: Space.Nutrition.Newsletter@nasa.gov